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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,091	01/28/2000	Patrick Brindel	Q57709	1773
23373	7590	03/27/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LI, SHI K	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/493,091

Applicant(s)

BRINDEL ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1,5,6,9,11-14 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-4,7,10 and 15-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1, 5-6, 11-14 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kosaka et al. (U.S. Patent 6,195,480).

Regarding claim 1, Kosaka et al. discloses in FIG. 1 a WDM fiber optical transmission system comprising optical transmitter 2 and optical receiver 4, connected by transmission path 7 and repeaters 5 and 6. Each repeater comprises amplifying unit 11. Kosaka et al. teaches in FIG. 12 an example of amplifying unit 11. FIG. 12 comprises two optical amplifiers 31 and 36, each of which amplifies wavelengths λ_1 - λ_4 and λ_5 - λ_8 , respectively. Each amplifier comprises dispersion compensation 67 for compensating a distortion of a signal. That is, Kosaka et al. teaches in FIG. 1 repeater 6₁ and 6₂. Repeater 6₁ comprises amplifier 36 and repeater 6₂ comprises amplifier 31. Together, these two amplifiers form a set of amplifiers corresponding to the set of channel regenerators of instant claim. Amplifier 36 of repeater 6₁ amplifies wavelengths λ_1 - λ_4 ; amplifier 31 of repeater 6₂ amplifies wavelengths λ_5 - λ_8 . Amplifier 36 of repeater 6₁ and amplifier 31 of repeater 6₂ are positioned at a predetermined distance from each other.

Regarding claim 5, Kosaka et al. teaches wavelengths λ_1 - λ_4 for the first group.

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Regarding claim 6, Kosaka et al. teaches in FIG. 12 dispersion compensation unit for synchronizing the channels.

Regarding claims 11-13, Kosaka et al. teaches in col. 13, lines 55-61 supervisory channel and control unit 59.

Regarding claim 14, Kosaka et al. teaches in FIG. 12 optical amplifier 10₂. The spacing of optical amplifier 10₂ is the same as the spacing of regenerators. That is, spacing of said optical regenerators is a multiple of the spacing of said optical amplifiers with a multiplier of 1.

Regarding claim 20, as described above, wavelengths λ_1 - λ_4 are regenerated by optical amplifier 36 of repeater 6₁ and wavelengths λ_5 - λ_8 are regenerated by optical amplifier 31 of repeater 6₂.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka et al. (U.S. Patent 6,195,480) in view of Okuno et al. (U.S. Patent 6,480,312 B1).

Kosaka et al. has been discussed above in regard to claims 1, 5-6, 11-14 and 20. The difference between Kosaka et al. is that Kosaka et al. does not teach the details of the demultiplexer 35 and multiplexer 37. Okuno et al. teaches in FIG. 1A circulator 51 for extracting channels and coupler 21 for inserting channels. One of ordinary skill in the art would have been motivated to combine the teaching of Okuno et al. with the fiber optical transmission system of Kosaka et al. because the approach of Okuno et al. is simple and cost effective. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a

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circulator for extracting channels and a coupler for inserting channels, as taught by Okuno et al., in the fiber optical transmission system of Kosaka et al. because the approach of Okuno et al. is simple and cost effective.

Allowable Subject Matter

5. Claims 2-4, 7, 10 and 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claim 8 is allowed.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 5-6, 9, 11-14 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl

19 March 2006



Shi K. Li
Patent Examiner